

CLAIMS:

1. A clustered Instruction Level Parallelism processor, comprising:
 - a plurality of clusters each comprising at least one register file and at least one functional unit;
 - a bus means for connecting said clusters, said bus comprising a plurality of bus segments, and
 - switching means, arranged between adjacent bus segments, for connecting or disconnecting adjacent bus segments.
2. Processor according to claim 1, wherein each cluster is coupled to at least one bus segment.
3. Processor according to claims 1 or 2, wherein two or more clusters are coupled to the same bus segment.
- 15 4. Processor according to claim 1, 2 or 3, wherein said bus means is a multi-bus comprising at least two busses.
5. Method for accessing a bus in a clustered Instruction Level Parallelism processor, wherein said bus comprises at least one switching means along said bus, comprising the steps of:
 - performing a sending operation based on a source register and a transfer word, and/or
 - performing a receiving operation based on a designation source register and a transfer word;
 - 25 - opening/closing said switching means according to said transfer word.
6. Method according to claim 5, wherein said transfer word represents the sending direction for the sending operation and the receiving direction for the receiving operation.

7. Method according to claim 6, wherein the default state of said switching means is closed.

5 8. Method according to claim 7, wherein the one of said switching means, which is closest to a cluster performing said sending operation or said receiving operation in the direction opposite of said sending or said receiving direction, is opened.

9. Method according to claim 6, wherein said sending direction or said receiving
10 direction is left, right or all.

10. Method according to claim 9, wherein no switching means is opened, if said sending direction or receiving direction is all.

15 11. Method according to claim 5, wherein said transfer word represents a switch configuration word, wherein said switching means are opened/closed according to said configuration word.